**Brain-Based Learning and Learning Environment Tip Sheet**

**Hearing / Acoustics**

1. Adding music into the regular classroom routine can help the students become relaxed and can help stimulate the students in various ways.
2. Provide a quiet corner. This is place where students can wear earplugs if they work best in complete silence
3. Learners typically have a dominant listening ear, which appeals to the side of their brain that will provide them with the best understanding. Therefore, teachers should change their position in the room frequently and change student seats frequently so that students’ dominant ear can receive optimal instruction.
4. Because the brain can process up to 20,000 bits of auditory information every second, getting students to focus and hear what you want them to hear can be a difficult task in the classroom. Therefore, efforts should be made to reduce ambient noise, echo effects, reverberation, and other acoustical problems. A few ways to do this is to include carpet, window shades, and other soft cloth material to help absorb excess sound waves and reduce echoing. Fluorescent light bulbs, which often create a humming noise, should also be replaced if possible.
5. Use familiar melodies to aid mastery of new content. For example, teaches your students all 44 presidents in order to the tune of "Yankee Doodle."

**Vision**

1. Use a variety of colors throughout your classroom and for different worksheets, pictures, photos, images, maps, presentations, etc. Be intentional about the colors you are using for the mood you would like to convey and the things you want students to remember. Bright colored posters and use of videos that help create mental pictures for learning targets enhance and stimulate the brain.  YouTube really does have some very good educational videos to help help get the main idea across. Putting up any picture or artwork that any student does creates a sense of belonging and achievement in that student.
2. Provide a variety of lighting types within your classroom, and take advantage of any natural light that you have available. Sunlight can affect concentration, energy, and moods of teachers and students. Also, lighting strongly influences vision, which then influences learning. Too much fluorescent can be distracting.
3. If natural lighting is limited, provide a variety of lighting levels throughout the day and around the classroom.  Small lamps in one area of the room, for example, could be used to provide a variation to overhead lighting.

**Touch**

1. Keep a comfortable temperature (around 70 degrees) within your classroom. It is better to be too cool than too warm, but it is best to be neither of these. Be responsive to the temperature needs of your students and allow them to wear or bring extra layers to school with them.
2. Have manipulatives available for students. These manipulatives can be stored anywhere in the room, giving students an opportunity to have something in their hand. For example, clay can be molded and shaped, providing an opportunity for physical action, leading to increase brain activity.

**Taste**

1. Help get students healthy snacks. The ability to give students a chance to get healthy snacks throughout the day will help students boost alertness and mental performance.
2. By allowing water bottles in the classroom, it can help students stay hydrated and help them stay focused.

**Smell**

1. By just adding plants into the classroom it can help make the air cleaner for you and your students. Four to eight plants in a classroom will get rid of the stale air that starves their brains.
2. Provide different smells in the room. Scents can have dramatic effect on attention and learning. Peppermint, basil, lemon, cinnamon and rosemary can enhance mental alertness. However, be careful. Know your students, because sometimes certain scents can cause nausea or allergic reactions!

**Stress / Emotions**

1. Incorporate a ritual of morning meeting. Morning meeting can be used anytime of the day but is usually done sometime in the beginning of the school day. Morning meeting consists of a greeting, sharing, and an activity. This would help with building in a physical component during the day as well as helping enhance the students’ mood and increase eustress or good stress in a safe environment.
2. Having students take ownership and feel like the room is something that they created is very important in them belonging to a community and participating in a safe environment.
3. High or sustained levels of distress can have large impacts on learning. For example memory can become strongly impaired or highly selective, and neuronal death can occur in the hippocampus. To counteract this, one strategy is to provide more predictability in the school day, such as posting agendas and using classroom rituals.
4. Have art materials in a place where students can easily access them, so they can use it for creative purposes.
5. Give students an opportunity to lead a class or discussion. This will allow students to take ownership in their learning.
6. Don't neglect students' emotional needs when planning learning experiences. Engage feelings and emotions when reacting to course content to improve students' emotional connectedness and thus retention.

**Movement**

1. Movement and energizers help learners relax and allows them to focus and function better.  Moving around in the classroom for group work, throwing a cush ball at targets or to partners during word association or memory games helps students relax and gain information without really thinking they are learning.  If anyone is familiar with "Tribes" you know the many ideas and energizers that are presented to create a community feeling in the classroom.
2. Provide room for movement.  Using tables or arranging desks in a manner that provides some open floor space will allow for the inclusion of movement activities that promote learning.
3. Have swivel chairs or medicine balls as an alternative to the hard plastic chairs for students to sit in. Even though students may be bouncing on the medicine ball or turning from side to side in a swivel chair, the movement will engage their brain more and help them to focus on the task at hand.

**Rhythms of the Brain**

1. Learning is bested when it is done in a “pulse” style. That means, there should be a time for focus, diffusion, and then focus again. Internal time is needed to processes information and create meaning. If settling time is given after each learning experience, it will help the knowledge to be committed to memory. If working with young learners, limit focused and intensive cognitive activities to 5-10 minutes, with adolescents, 10-15 minutes, and with adults, no more than 25 minutes.
2. Change the schedule at times: Many students rely on schedules and maintaining the same schedule day to day but according to the reading there are times during the day that might lend themselves better to other activities.

**Gender**

1. Acknowledge and plan for differences in gender.